

DOCKET NO: 292187US0PCT

IN THE UNITED STATES PATENT & TRADEMARK OFFICE

IN RE APPLICATION OF :  
KLAUS BOHMHAMMEL, ET AL. : EXAMINER: NGUYEN, N. Y. M.  
SERIAL NO: 10/586,369 :  
FILED: JULY 18, 2006 : GROUP ART UNIT: 1734  
FOR: METHOD FOR THE PRODUCTION :  
OF HSICl3 BY CATALYTIC  
HYDRODEHALOGENATION OF SICl4

REPLY BRIEF

COMMISSIONER FOR PATENTS  
ALEXANDRIA, VIRGINIA 22313

SIR:

Responsive to the Examiner's Answer of April 14, 2011, Appellants submit the following Reply Brief in rebuttal.

I. REAL PARTY IN INTEREST

The real party in interest is Evonik Degussa GmbH of Germany.

II. RELATED APPEALS AND INTERFERENCES

None.

III. STATUS OF THE CLAIMS

Claims 1-17, 19-23 and 26-33 are pending in the present application. All of the pending claims stand rejected. The rejection of all pending claims is appealed.

IV. STATUS OF THE AMENDMENTS

The Request for Reconsideration filed on October 25, 2010 was entered and considered. The Amendment filed on May 4, 2010 was entered and considered.

VI. GROUNDS OF REJECTION

- (I) Claims 27 and 28 are rejected as failing to comply with the written description requirement under 35 U.S.C. § 112, first paragraph.
- (II) Claims 1-17, 19-23 and 26-30 are rejected for indefiniteness under 35 U.S.C. § 112, second paragraph.
- (III) Claims 1-3, 5, 14-15, 17, 21-22, 27 and 29-30 are rejected as anticipated by Yamanaka (U.S. 6,653,212) under 35 U.S.C. § 102(b).
- (IV) Claims 1-11, 13-17, 19-23, 27 and 29-33 are rejected as obvious under the meaning 35 U.S.C. § 103(a) over Yamanaka in combination with DeLuca (U.S. 5,910,295) or Rodgers (U.S. 3,933,985).
- (V) Claims 1-17, 19-23 and 26-30 are rejected as obvious under the meaning 35 U.S.C. § 103(a) over JP '017 (JP 57-118017) in combination with Yamanaka, Roewer (U.S. 5,716,590) and Rodgers.

VII. ARGUMENT

**(III-A) The rejection of the claims as anticipated by Yamanaka should be withdrawn because Yamanaka uses hydrogen as an inert carrier gas and not as a reactant.**

Yamanaka explicitly characterizes hydrogen gas (i.e., H<sub>2</sub>), as an *inert* gas (see column 48, lines 48-52 of Yamanaka). Appellants submit that it is readily evident to those of skill in the art that an inert material is one that does not undergo reaction under the conditions of its

use. Yamanaka describes the use of hydrogen gas as a carrier gas and distinguishes such carrier gases from material gases (i.e., reaction gases) at column 48, lines 48-52.

Appellants submit that it is readily apparent to those of skill in the art that Yamanaka describes hydrogen as an inert carrier gas that does not undergo reaction in the Yamanaka process.

The Examiner appears to give no weight to this characterization and disclosure in the Yamanaka patent. The Examiner takes the position that Yamanaka describes a hydrogen gas that is inherently reactive (see the last sentence on page 18 of the April 14 Examiner's Answer).

The self serving nature of the Examiner's interpretation is self-evident. The Examiner takes the erroneous position that hydrogen is reactive in the Yamanaka process otherwise the Examiner's rejection must fall. However, as explicitly disclosed in Yamanaka, hydrogen gas is inert and thus Yamanaka cannot anticipate a process in which hydrogen is a reactive gas.

Appellants thus submit the rejection of the claims in view of Yamanaka should be overturned.

**(III-B) The rejection of the claims as anticipated by Yamanaka should further be withdrawn because Rodgers does not support the Examiner's assertion of inherency.**

Rodgers and Yamanaka describe entirely different processes. This is perhaps no better emphasized by the contradictory functions of the respective processes. As already argued on page 10 of Appellants' Appeal Brief of January 21, 2011. Yamanaka describes a process in which the deposition of silicon is the goal whereas Rodgers describes a process in which the deposition and formation of silicon are avoided.

The Examiner now cites to Figure 2 of Rodgers as evidence of inherency. Figure 2 describes a reaction between  $\text{HSiCl}_3$  and hydrogen, not a reaction between  $\text{SiCl}_4$  and

hydrogen. Figure 2 provides no evidence relating to the evidence of inherency with respect to the reaction of hydrogen and silicon tetrachloride recited in present Claim 1.

Appellants submit that the Examiner has failed to set forth any technically or legally reasonable basis for asserting inherency and thus the rejection should further be overturned.

Moreover, the Examiner makes assertions with respect to the relative reaction rates of two different reactions described in the Rodgers patent and draws conclusions with respect to the formation of SiHCl<sub>3</sub> in Yamanaka. The Examiner's assertions in this respect are not supported by the evidence of record and the rejection should be withdrawn to the extent the examiner relies on unsubstantiated evidence.

**(IV) The rejection of the claims as obvious in view of Yamanaka in combination with Rodgers should be withdrawn because the Examiner failed to show that the cited art suggests or discloses the hydrodehalogenation of silicon tetrachloride with hydrogen to form HSiCl<sub>3</sub>.**

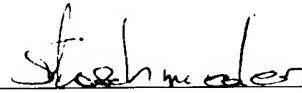
On page 21, second full paragraph of the Examiner's Answer, the Examiner asserts that it would have been obvious to carry out the CVD process of Yamanaka "under atmospheric pressure or other pressure". There is no evidence of record supporting the Examiner's assertion. Yamanaka makes it explicitly clear that the Yamanaka process is carried out in a "vacuum chamber" (see the Abstract of the Yamanaka patent). The Examiner proposes a modification to the Yamanaka process that is entirely contradictory with the entire scope of the Yamanaka disclosure.

Appellants thus submit that the allegedly obvious modification of Yamanaka is contradictory to the express effect and function of the Yamanaka process and would have no expectation of success for those of ordinary skill in the art.

For the reasons discussed above in detail and for the reasons set forth with particularity in Appellants' January 21, 2011 Appeal Brief, Appellants respectfully request the Board overturn the rejections of record in the present application.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,  
MAIER & NEUSTADT, L.L.P.



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